School Library Research Summarized:
A Graduate Class Project

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REVISED EDITION
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Preface

During the Spring of 2011, I engaged my graduate students taking LSC School Library Advocacy in a class project to review and chart the characteristics of school library programs that resulted in improved student learning based on available research from statewide school library studies. The resulting document was the first edition of this booklet and a complementary website was created.

This revised edition includes five new studies (Colorado 2012, Kansas 2012, New Jersey 2011, New York 2012, and Pennsylvania 2012). However, the Delaware, New Jersey, and New York studies are continuations of research cited in the first edition. Using smaller samplings of surveys or focus groups, these studies drill down into particular aspects of school library programs, such as what quality programs look like, what effective school librarians do and their dispositions. They also seek to learn what stakeholders—teachers, school administrators, librarians, students, and parents—value and think about the relationship between school library programs and student academic success.

At the time that the first edition was published and the website launched, none of us realized that the booklet would be so widely used and referenced. However, as the economic climate and commitment to adequately fund education and school libraries declined, more individuals used the booklet as an advocacy tool to convince school administrators and school board officials that school library programs with certified, full-time librarians are essential building blocks for 21st-century learning. It is hoped that this revised edition which includes new studies will continue to assist librarians to foster advocates among the many stakeholders who care about the education and future of our students.

A new website with additional information will be launched at http://sl-it.mansfield.edu that includes a downloadable copy of this booklet. The information at the website serves to complement the Library Research Service website (http://www.lrs.org/data-tools/school-libraries/impact-studies/) and update Scholastic’s School Libraries Work! (http://www.scholastic.com/content/collateral_resources/pdf/s/slw3_2008.pdf) which was last published in 2008.

I would like to acknowledge the Mansfield graduate students who participated in this project for their valuable contribution to the profession. From the Spring 2011 class: Dorene Akujobi (PA), Sarah Clayton (NY), Sarah Davis (PA), Aimee Feldman (NM), Elizabeth Galaska (PA), Erin Hildebrand (PA), Valarie Hunsinger (NY), Melissa Leman (NJ), Ronica Luke (PA), Adam Marcus (NY), Diane McLaren-Brighton (MI), Renee Mintz (NY), Kelly Petri (PA), Jeremy Shanly (NY), Pennelope Shobert (PA), Erika Strout (PA), Jessica Von Wendel (WA), Linda Webster (IL), and Todd Wehmeyer (WA); from the Summer 2013 class: Mary Jo Cooper (OH).

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Quality school library programs impact student achievement. Since the 1990’s when standardized tests became a major indicator of student learning, numerous studies have been conducted to confirm the educational gains that school library programs provide in student learning. The most universal finding is the presence of full-time, certified school librarians and appropriate support staff who implement a quality, school-integrated program of library services. In addition, it has been shown that incremental increases in the following can result in incremental gains in student learning:

- increased hours of access for both individual student visits and group visits by classes;
- larger collections of print and electronic resources with access at school and from home;
- up-to-date technology with connectivity to databases and automated collections;
- instruction implemented in collaboration with teachers that is integrated with classroom curriculum and allows students to learn and practice 21st century skills, such as problem-solving, critical thinking, and communication of ideas and information;
- increased student usage of school library services;
- higher total library expenditures; and
- leadership activities by the librarian in providing professional development for teachers, serving on key committees, and meeting regularly with the principal.


The studies that examined standardized test data also factored in school and community differences. School factors generally included expenditures per pupil, teacher per pupil
ratio, average years of experience of classroom teachers and average salaries. Community differences generally included educational attainment of adults in the community, children in poverty, and racial demographics. Although the effects of poverty still remain a primary force in determining student academic success, state after state showed that such socio-economic conditions could not explain away the impact of school library programs, especially school library staffing, funding, and quality collections. For example, the Wisconsin study of 2006 found that at the high school level the impact of a robust library program was almost seven percentage points greater than the impact of the socio-economic variables. In the 2009 California study, when considering school and community variables, school library programs accounted for between 19% and 21% of the variance in STAR test scores. On the English Language Arts test, the library program was a stronger predictor of success than the other school variables. On the U.S. History test, the library program was, in fact, the best predictor of student performance—better than other school variables and better than community variables including parent education and poverty levels.

Clearly, the studies confirm that quality school library programs with full-time, certified librarians and library support staff are indicative of and critical to student achievement. In fact, quality school library programs may play an even greater role in providing academic support to those students who come from economically disadvantaged backgrounds. In closing the achievement gap and assuring that all students are prepared with the 21st century skills they need to succeed, school leaders and librarians need to embrace this body of research and foster school library programs that can make a difference in student learning. Schools that support their library programs give their students a better chance to succeed.

The Pennsylvania Study of 2011-2012

The most recent study entitled How Pennsylvania School Libraries Pay Off: Investments in Student Achievement and Academic Standards, conducted by Keith Curry Lance and Bill Schwarz, RSL Research Group, Louisville, Colorado, examined school library infrastructure (staffing, budgets, collections, technology, and access hours) that most contributes to student achievement, the costs and benefits associated with them, and what is needed to develop students with 21st century skills. Three data sets were utilized—1) student reading and writing standardized test data from the 2011 Pennsylvania System of School Assessment (PSSA), including subgroup data for students who were classified by PSSA definitions as economically disadvantaged, Hispanic, Black, and students with disabilities, 2) quantitative data from 2,180 (73%) of the state's public school libraries collected by the Pennsylvania State Board of Education in Spring 2011, and 3) qualitative survey data about the roles of school library programs and librarians in teaching the American Association of School Librarians’ (AASL) Standards for the 21st-Century Learner and the Common Core standards as initiated in Pennsylvania from 950 teachers, 597 school librarian, and 295 school administrators.
The findings were consistent with previous research that indicates that students in schools with well-supported, resourced, and professionally-staffed school libraries achieve higher levels of academic success. Consistently, reading and writing scores were better for students who had a full-time, certified librarian than those who didn’t. Students who were economically disadvantaged, Black, Hispanic, and students with disabilities benefitted proportionally more than students generally. Additionally, the impact of school library programs was greater proportionally on writing than reading scores. Educators’ responses to survey questions, which were correlated to their schools’ PSSA tests scores, indicated that what librarians teach both addresses academic standards and impacts students’ standardized test scores. This study adds to the evidence that all K–12 students need quality school library programs with full-time certified staff to achieve academically. These findings also suggest that staffing libraries with certified librarians can help close achievement gaps among the most vulnerable learners. The research was funded by the U.S. Institute of Museum and Library Services as a 2011 National Leadership grant. Grant partners were the Health Sciences Libraries Consortium (HSLC), the Pennsylvania School Librarians Association (PSLA), and the Education Law Center of Pennsylvania (ELC). Additional information is available at the project website http://paschoollibraryproject.org.

### School Library Impact Studies Chart

School Library Program Components and the States/Province in which they were found to have a Positive Association with Student Achievement

<table>
<thead>
<tr>
<th>LIBRARY SERVICE / CHARACTERISTICS</th>
<th>STATE / PROVINCE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>STAFFING / AVAILABILITY</strong></td>
<td></td>
</tr>
<tr>
<td>Number of hours of staffing at library</td>
<td>CA1, CA2, CO1, CO2, DE1, FL, IA, IL, IN, KA, MA, MI, MN, NC, NM, NJ1, OR, PA1, PA2, TX, UT, WI</td>
</tr>
<tr>
<td>Full-time librarian</td>
<td>AK, CA2, CO3, CO4, DE1, FL, IA, IN, KA, MA, MI, MN, NJ1, OH, ON1, ON2, OR, PA1, PA2, WI</td>
</tr>
<tr>
<td>Scheduling to make libraries available</td>
<td>IA, FL, ID, IL, IN, MI, MO, NJ1</td>
</tr>
<tr>
<td>Number of hours the library is open to students &amp; teachers</td>
<td>AK, CA2, FL, IA, IL, IN, MA, MI, MN, MO, NC, NM, ON1, OR, PA1, PA2, TX, WI</td>
</tr>
<tr>
<td>Certified school librarian</td>
<td>CA2, CO3, CO4, DE1, FL, IA, ID, KA, MA, MI, MN, MO, NJ1, NY1, OH, PA2, WI</td>
</tr>
<tr>
<td><strong>Support staff</strong></td>
<td>CA2, CO4, DE1, FL, IA, MA, NJ1, OH, ON1, OR, PA1, PA2, TX, WI</td>
</tr>
<tr>
<td><strong>Use of volunteers in addition to certified staff</strong></td>
<td>FL, MA, TX, WI</td>
</tr>
</tbody>
</table>

### INSTRUCTION / INFORMATION LITERACY CURRICULUM

| **Instruction to students** | AK, CA1, CA2, CO1, DE1, DE2, FL, IA, ID, IL, IN, MA, MI, NJ1, NJ2, NM, NY2, NY3, OH, ON1, ON2, OR, PA2, TX, WI |
| **Provide reading incentive programs** | FL, IA, NJ, NM, ON2, WI |

### PROFESSIONAL DEVELOPMENT / TRAINING

| **Professional development training for teachers by librarians** | AK, CA1, CA2, CO2, DE1, IA, ID, IN, NJ1, NJ2, NM, OH, OR, PA1, PA2, TX, WI |
| **Provide teachers with technology support** | CA2, DE1, DE2, ID, NJ2 |

### COLLABORATION / COOPERATION

| **Collaboration between librarians and teachers** | AK, CA1, CA2, CO2, DE1, DE2, FL, IA, IL, IN, MI, NJ2, NM, OH, ON2, OR, PA1, PA2, TX, WI |
| **Meet regularly with the principal** | CA, CO2, DE, IA, ID, IN, NJ1, NM, ON2, OR, PA2, TX, WI |
| **Serve on key committees (standards, curriculum, etc.)** | CA, CO2, DE1, IA, ID, IN, NJ1, ON, OR, PA1, PA2, TX, WI |
| **Cooperation with public libraries** | AK |

### ELECTRONIC NETWORKING AND TECHNOLOGY

| **Networked computers in the library for student use** | AK, CA1, CA2, CO2, DE1, DE2, FL, IA, IL, IN, MI, MO, NJ1, NJ2, NM, OH, OR, PA1, PA2, TX, WI |
| **Libraries that network electronic resources to classrooms** | CA2, DE1, DE2, FL, IA, IL, IN, MI, NJ1, NJ2, OH, OR, PA1, TX, WI |
| **Automated collections / online catalog** | CA2, DE1, FL, IA, IN, MA, MI, MO, NJ1, NJ2, NY1, OR, WI |
| **Librarians facilitate use of technology to students and teachers** | DE1, DE2, FL, NJ2, NY1, NY2, NY3, OH, ON2 |

### COLLECTIONS AND RESOURCES

<p>| <strong>Print volumes held or per student</strong> | CA2, CO1, CO2, DE1, FL, IA, IL, IN, MA, MI, NJ1, NM, OR, PA1, PA2, TX, WI |
| <strong>Recency/currency of copyright dates</strong> | DE1, FL, IA, IL, NC, NJ1, TX, WI |
| <strong>Periodical subscriptions per 100 students</strong> | CO2, CO3, DE1, FL, IA, IL, MA, NJ1, NM, OR, PA1, TX, WI |
| <strong>Video collections per 100 students</strong> | CO3, DE1, FL, IA, MA, MI, NJ1, NM, PA2, TX, WI |</p>
<table>
<thead>
<tr>
<th>Audio materials</th>
<th>IA, MA, MI, NJ1, NM, PA2, TX, WI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronic reference titles per 100 students</td>
<td>CO2, FL, NJ1, NM, WI</td>
</tr>
<tr>
<td>E-Books</td>
<td>NJ1, PA2</td>
</tr>
<tr>
<td>Access to licensed databases</td>
<td>CO2, IA, IN, MI, NC, NJ1, NM, OR, PA1, PA2, WI</td>
</tr>
<tr>
<td>Other: Statewide electronic catalog</td>
<td>FL, IA, MI, NJ1, PA1, PA2, WI</td>
</tr>
<tr>
<td>Other: Collection development policy</td>
<td>AK, FL, NY1, TX</td>
</tr>
<tr>
<td>Other: Collection analysis</td>
<td>DE1, NJ1</td>
</tr>
</tbody>
</table>

### USAGE

| Usage of library (as measured by the number of visits to the library individually or in groups) | CO3, FL, IA, IL, IN, MA, MI, MO, NM, NY2, ON1, OR, PA2, TX, WI |
| Usage of library (as measured by the number of books & materials checked out) | FL, IA, IL, MI, MO, WI |
| Flexible scheduling | CA1, CO2, DE1, FL, ID, IL, IN, MI, NJ1, OH, ON2, PA2, WI |

### FUNDING / BUDGET

| Library expenditures per student/total budget | CA1, CA2, CO1, CO2, CO3, DE1, FL, IA, IL, IN, MA, MA, MI, MN, NC, NJ1, NM, ON2, OR, PA1, PA2, TX, WI |

### WORKS CITED

State Abbreviations Used in Chart above, the Citation and Link

**AK**

**CA1**

**CA2**

**CO1**

**CO2**

**CO3**


**OTHER RECOMMENDED RESOURCES**


School Library Impact Studies
The Major Findings from the Past Ten Years

Staffing

Consistently, Reading scores are better for students who have full-time certified librarians. In schools with full-time librarians, “Below Basic” scores not only improve, but improve more from elementary to middle to high school. *(Pennsylvania 2012)*

On average, the percentage of students scoring “Advanced” in Writing is 2½ times higher for schools with a full-time, certified librarian than those without one. Additionally, in schools where libraries are staffed with both full-time, certified librarians and support staff, the percentage of students scoring “Advanced” in Writing is almost twice as high as those with full-time, certified staffing alone. *(Pennsylvania 2012)*

Elementary students in schools with certified school librarians are more likely to have higher ELA achievement scores than those in schools with non-certified school librarians. *(New York 2010)*

In a study of 3rd and 6th grade students, the presence of a school librarian was the single strongest predictor of reading enjoyment. Also, 3rd and 6th graders in schools without trained library staff tended to have lower achievement on reading tests. *(Ontario 2006)*

Higher library staffing levels at all grade levels were linked to higher reading performance, with 7% to 13% increases in elementary through high school. There were also substantial increases in writing scores in elementary and middle school of up to 18%. *(Illinois 2005)*

Library staffing levels of both professionals and paraprofessionals were significantly related to increases in the library services provided and increases in those services correlated with higher STAR test scores. The strength of the relationship between library services and test scores increased with grade level. These results remained significant when accounting for all other school and community variables, including average parent educational attainment, poverty, ethnicity, percentage of English language learners, and average teacher salary. *(California 2008)*

Library assistants working without the supervision of a trained school librarian had no impact on reading scores. *(Colorado 2012)*

From 2005 to 2011, students at schools that gained or maintained certified librarians averaged higher reading scores and higher increases in those scores than students without a librarian. This association could not be explained away by local economic conditions. *(Colorado 2012)*
From 2006-2009, when school librarians’ hours were reduced or eliminated at a school building, there tended to be a negative influence on student learning and achievement as evidenced in the reading, math, science, history/government, and writing test data at all three educational levels—elementary, middle, and high school. This may suggest that the stability of librarian staffing may matter almost as much as the level of staffing. Changing the FTE allocation every year or two may have a disruptive effect on student achievement. (Kansas 2012)

**COLLABORATION**

When libraries had clerical support staff in addition to certified library staff, test scores showed marked improvement due to the fact that the librarian could focus on instructional collaboration with teachers to improve scores rather than on the day-to-day operations of managing the library. (California 2006)

Teachers were three times more likely to rate their literacy teaching as excellent when they collaborated with librarians. (Idaho 2009)

Across grade levels, better-performing schools also tended to be those whose principals valued collaboration between librarians and classroom teachers in the design and delivery of instruction. (Indiana 2007)

**INSTRUCTION**

Key to an exemplary library program is the school librarian’s ability to be an effective teacher who maximizes teaching time, providing educational support and leadership through partnering and collaboration, while finding opportunities for integration and cross-curricular connections. (Ontario 2009)

Students in schools where the librarian spent more time on instructionally-related student and teacher activities had higher WKCE scores. (Wisconsin 2006)

Where principals and other administrators rated the teaching of Information and Communication Technologies standards as “excellent,” students at all three grade levels—elementary, middle and high school—were consistently more likely to earn advanced scores on the ISAT reading and language arts tests. (Idaho 2009)

School librarians help students acquire unique skills not taught in the classroom and information and technology skills essential for students in the 21st century. (Wisconsin 2006)

New Jersey’s school librarians contribute to student learning outcomes through an instructional program that includes the mastery of content and curriculum standards. They also address outcomes related to the development of reading through school library services that increase interest in reading, increase participation in reading, expand reading interests, and help students to become more discriminating readers. (New Jersey 2010)
With notable consistency, Advanced Reading and Writing scores were earned by students at schools where administrators, teachers, and librarians rated the library program as “excellent” in teaching all four Standards for the 21st-Century Learner (by the American Assn. of School Librarians): Inquiry-Based Learning, Informed Decision-Making, Knowledge Sharing, and Pursuing Personal Growth. (Pennsylvania 2012)

**SCHEDULING**

Flexible scheduling and program planning stood out as the most important variable in predicting reading scores. (California 2006)

Elementary schools with more flexibly scheduled libraries performed 10% better in reading and 11% better in writing on the ISAT tests of fifth-graders than schools with less flexibly scheduled libraries. (Illinois 2005)

The flexibility of an open timetable allowed for collaborative teaching with depth. This was attributed to the principal’s support in scheduling and through the extra funding for a full-time librarian position. (Ontario 2009)

**ACCESS**

The California study indicated that student access to the school library—measured by the number of hours the library is open—was significantly related to test scores at all three levels. (California 2008)

Test scores were more than 20% higher in elementary schools where library staffing is at 80 hours per week or more than in schools with less than 60 hours per week. (Florida 2003)

**TECHNOLOGY**

The library’s provision of a technological infrastructure, instruction in its use, and the provision of information technology tools are highly valued. In the Ohio study, over 88% of faculty confirmed that the school library helped students to use the Internet better and over 80% of students stated that computers have helped them find information inside and outside of the school library. (Ohio 2003)

Elementary schools with more computers and technology equipment made up the top 25 schools with the highest WCKE scores in reading and language arts. (Wisconsin 2006)

The two highest ranking statements on a student survey about how the library program helped them were: “Computers help me find information inside and outside of the school library” (51%) and “Computers in the school library help me do my school work better (48%).” (Delaware 2006)

At both middle school and high school levels, as hours open and the amount of technology in libraries increased, there was a corresponding increase in both English Language and Social Studies test scores. (California 2008)
COLLECTIONS

In elementary schools that scored in the top one-third on the FCAT, library circulation was 45% higher. *(Florida 2003)*

Students with access to well-resourced libraries are two to five times more likely to score “Advanced” in Writing than students without such libraries. *(Pennsylvania 2012)*

Schools with newer collections in their libraries had higher test scores. *(Illinois 2005)*

One third of the variance in the size of a collection of a school library was explained by the school’s socioeconomic status (SES). Libraries in mid-low socioeconomic groups purchased significantly fewer books. In other words, the lower the SES, the fewer books in the collection. *(New Jersey 2010)*

Certified librarians are more likely to select library resources that represent different points of views and that support the curriculum. *(New York 2009)*

BUDGET

Elementary schools that spend more on their libraries average almost 10% higher writing performance, and middle schools that invest more in their libraries average almost 13% higher writing levels. *(Illinois 2005)*

A strong positive relationship between budget and test scores was found at the high school level in relation to Language Arts and History scores. *(California 2008)*

There is a statistically significant relationship between higher reading scores and larger school library budgets for books and electronic resources at the elementary level. *(Minnesota 2004)*

PROFESSIONAL DEVELOPMENT

Across all grade levels, better-performing schools tended to be those whose principals placed a higher value on librarians providing in-service opportunities to classroom teachers. *(Indiana 2007)*

School administrators should foster the creation of schedules, facilities, and relationships that enable librarians to be “resident” providers of in-service professional development to teachers. *(Idaho 2009)*

ACHIEVEMENT GAP

Students who are poor, minority, and students with disabilities (have Individualized Education Plans), but who have full-time librarians, are at least twice as likely to have “Advanced” Writing scores as their counterparts without full-time librarians. For black and Hispanic students, access to more than 12,000 library books more than doubles their chances of obtaining “Advanced” Writing scores and cuts their risk of “Below Basic” Writing scores in half. *(Pennsylvania 2012)*
Proportional differences in the impact of school librarians on the lowest achievers indicates that school librarians at the elementary school level can play an important part in closing the achievement gap. (Colorado 2010)

In a declining economy, the number of hours a school library remains open can be critical, especially for students without access to books or technology at home. The California study draws attention to the importance of access to the school library and its resources in addressing educational equity. (California 2008)

With poverty utilized as a control variable, both endorsed (certified) and non-endorsed librarians had positive and statistically significant correlations with reading scores. Notably, however, these relationships were stronger for endorsed librarians than non-endorsed ones. (Colorado 2012)

Students in high poverty (33–67% free and reduced-price lunch) with a full-time school librarian achieved approximately 13 points higher in math than those with no school librarian. (Kansas 2012)

High-need schools were less likely to have access to a librarian and as a result had lower test scores, whereas scores were significantly higher in schools with certified librarians. (New York 2010)

 NOTES: Citations and links for the studies referred to in the parentheses are listed below the “School Library Impact Studies Chart.”
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